Chromium carbide plate

Six Classifications of chromium carbide plate		
No.	**Grade**	**Feature and Property**
1.	General Wear Plate	C:3.0-4.5% Cr:15-27%
2.	High Chromium Wear Plate	C:3.5-5.5% Cr:27-40% , wear resistant overlay thickness maximum up to 25mm.
3.	Impact Resistant Wear Plate	Independent R&D, with high wear and high impact resistance.
4.	Heat Resistant Wear Plate	Independent R&D , with heat resistance maximum up to 900 ℃.
5.	No Crack Wear Plate	Rockwell Hardness:50-55HRC, mainly used in housing liner of steel mill, domestic unique product.
6.	Special Chemical Elements Wear Plate	OEM customized, Chemical elements: Mo, Nb, Ni, W, V, etc.

Other Feature and Property

Chemical composition: Chromium carbide plates are manufactured by welding one or multiple abrasion resistant layers on a medium or low carbon steel base plate. The overlay alloy has a high amount of chromium carbide hard particles.
Microstructure: The carbide (Cr7C3) volum fraction on the microstructure is above 50%.
Rockwell Hardness: Chromium carbide hard particles are distributed evenly throughout the layer, creating a strong microstructure, The hardness is between HRC58-65 and depend on the overlay's thickness.
Wear resistance: Our test shows that the wear resistance of Wodon plate is 20 times higher than low carbon steel and 8 times than heat treated steel.
Flatness tolerance: Flatness tolerance is ±3mm/m.
Thickness tolerance: Uniform overlay thickness, with tolerance within 0-0.5mm.

3+3,4+4,5+5,6+4,6+5,6+6,6+8,8+4,8+5,8+6,8+7,8+8
10+4,10+5,10+6,10+7,10+8,10+9,10+10,10+20
12+4,12+5,12+6,12+7,12+8,12+10,12+11,12+12,12+18,12+20, 14+6,14+8,14+10
16+6,16+8,16+10,18+6,18+8,18+10,20+5,20+6,20+8,20+10,30+10,40+10,20+20,20+25
We can customize the plates in different sizes and thicknesses based on customer's drawings.



Wear Plate and Wear Components Packing	
Size	wear plate size: 1400*3000mm;1400*3500mm; 14000*3400mm; 2100*3500mm, Customized.
Packing	Steel pallets, Non fumigation pallets, film, Customized.
Delivery Time	10- 40 days.

The production process of wear-resistant chromium carbide overlay plate is metallurgical surfacing welding process. The surfacing layer is combined with the steel plate, and the interface of the composite material is combined through metallurgy. Has good technical performance.

The main component of the wear-resistant layer of the low carbon steel bottom plate is high carbon and high chromium. The temperature difference between the steel plates near the welding seam is large, which will cause uneven expansion, contraction and deformation. The wear-resistant layer has high hardness and poor toughness. The coefficient of thermal expansion of the steel plate is very different from that of the wear-resistant layer. The steel plate with good toughness can withstand large thermal deformation, and the surfacing layer with poor toughness has poor thermal deformation ability. And thermal stress is formed inside.

Therefore, transverse cracks of different sizes will be formed during the welding cooling process, which is the result of stress relief. If the welding stress is not released, it will easily break and fall off in the subsequent processing.

The wear-resistant plate of our company is observed by naked eyes and metallographic observation, and the crack only exists in the surfacing layer. No cracks on the substrate and fusion line.